

## February 15, 2009 - UPMC Helping Military Combat Diabetes

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Testing team approach to care

By David Templeton, Pittsburgh  
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What better human laboratory than the U.S. Air Force to test whether a new method of diabetes management will fly?

The University of Pittsburgh Medical Center and the University of Pittsburgh Diabetes Institute have established a Diabetes Center of Excellence at Lackland Air Force Base, San Antonio, Texas, to test a team approach to treating and managing diabetes.

If the model proves successful, UPDI Executive Director Linda Siminerio said, it could be expanded to provide diabetes care on military bases nationwide as well for all Pennsylvania residents.

Lackland's Wilford Hall Medical Center is the Air Force's largest medical facility. The project at Wilford Hall will use a chronic-care management team to educate and treat patients rather than relying on a single doctor to carry the load.

"We and our military partners agree this appears to be the best systematic approach for improving the diabetes processes and outcomes for military, their dependents and retirees," Dr. Siminerio said.

The idea is to put a team in one location where patients can obtain comprehensive care with one visit and where their progress and results can be tracked. The team's goal: to treat patients, and also to educate and encourage them to gain control of the disease.

The Air Force team at Wilford Hall includes an endocrinologist; specialists in podiatry, eye and other specialty care; along with nurses, diabetes educators, dietitians, pharmacists, behavior therapists, exercise physiologists, social workers and family members. The team even can include representatives from the local grocery store.

"Diabetes is 24-7," Dr. Siminerio said. "Between physician visits, people must self-manage their diabetes. In order for people to do that, they need the expertise and support of the team."

Success will hinge on reductions in average blood-sugar, cholesterol and blood-pressure levels, and prevention of health complications for the 9,000 patients with diabetes who receive treatment on the base. Better health results would lower health-care costs for the U.S. military and American taxpayer.

Maj. Charles Russell, who teaches at the Brooks City-Base, an Air Force educational facility seven miles from San Antonio, has been getting care for type 1 diabetes at Wilford Hall since his 2003 diagnosis and considers himself a model patient. The team approach, he said, offers many advantages.

"It's much easier to get communications and talk to people you need to talk to and get answers when you need them," Maj. Russell said. "In an hour-and-a-half, you go through all the screenings you need while you're there. They test your feet, have an interview with a physician, they take vital signs and set you up for your next lab appointment and regular appointment."

For years, UPDI has experimented with the chronic-care model emphasizing a team approach. The model was established by Dr. Edward Wagner, director of the MacColl Institute for Health in Seattle.

UPDI's PRIDE program -- Pittsburgh Regional Initiative for Diabetes Education -- provides comprehensive medical care for diabetes throughout Western Pennsylvania with an initial goal of establishing diabetes education programs in rural medical centers. That program's success gave UPDI confidence its system will work at Lackland.

Both type 1 and type 2 occur when a person's pancreas no longer produces enough insulin -- the hormone that allows blood glucose to enter cells and be used as energy. Type 2 diabetes can result from lifestyle habits leading to weight gain, lack of exercise and poor diet.

In either type of diabetes, too little insulin can cause blood-glucose levels to rise to life-threatening levels. Even those on insulin and other medications designed to reduce blood-sugar levels often have elevated readings that, in time, can cause heart disease, circulatory problems leading to lower-limb amputations, and eye and kidney damage.

Attention from various specialists, a healthy diet, exercise, and a regimen of blood testing to balance food, medications and blood-glucose levels are factors in improving health outcomes.

In 2003, U.S. Rep. John Murtha, D-Johnstown, learned from the Air Force Surgeon General that 144,000 Air Force personnel and members of their families had diabetes. Since then, he has sponsored federal grants to reduce the health impact of the diabetes epidemic afflicting more than 25 million Americans.

Funding to date has included \$95 million Mr. Murtha ushered through the Defense Appropriations Bill for a National Type 2 Diabetes Model Program.

The Diabetes Center of Excellence at Wilford Hall, he said, "will provide the Air Force with a comprehensive clinic focused on the prevention and management of type 2 diabetes."

"This will improve diagnosis and treatment of the disease, and our hope is that the program will become a model for the rest of the country," Mr. Murtha said.

UPDI will test whether the team approach for chronic-care management meets its advertised potential.

"Diabetes is a problem globally in our society," said Dr. Mark W. True, an Air Force major and endocrinologist.

He said the entire staff has an elevated level of knowledge about dealing with type 2 diabetes and obesity.

"We certainly enjoy the collaboration with our Pittsburgh counterparts and are looking forward to continuing the work," Dr. True said. "Our nation as a whole is struggling with the problem we're facing with diabetes. It's not a unique problem with the military."

Donna Wolf, UPDI's research director, will analyze progress at Wilford Hall, which has 20 UPMC staff members. She will focus on pediatric and inpatient care, prevention and treatment. Results will be compared with those collected before the project took effect at the beginning of the year.

The 9,000 people with diabetes at Lackland include active-duty military and their families, retirees and their spouses.

Before the program was launched there, people with diabetes often had to leave the base for specialized care. In a nation with too few endocrinologists, Dr. Wolf said, there are even fewer in the military to treat diabetes.

"In a year or two we'll get good numbers," Dr. Wolf said. "We want to see if we can get the cost down."

Dr. Michael Dunn, a retired Army brigadier general who works at the University of Pittsburgh School of Medicine turning research into treatment practices, said "diabetes care is a team sport."

"One strength is the military pays attention to outcomes," said Dr. Dunn, noting that the military will heed lessons learned through UPMC pilot programs in Western Pennsylvania, including PRIDE.

"Preventative care for diabetes is not rocket science. But diabetes is a moving target," he said. "Preventive care will allow us to determine what's working and not working. In the military we can do things that the rest of America can learn from."

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